

ABSTRACT OF THE DISCLOSURE

A probe structure for a scanning probe microscope comprises a nanowhisker (16,34) projecting from a free end of an upstanding tip member (4,26), and being formed integrally with the tip member. In another embodiment, a data storage medium comprises an array of nanowhiskers (54), each nanowhisker being formed from magnetic material, the diameter of the nanowhisker being such that a single ferromagnetic domain exists within the nanowhisker, preferably having a diameter not greater than about 25 nm and more preferably not greater than about 10 nm, and a read/write structure comprising the probe structure for injecting a stream of spin-polarised electrons into a selected nanowhisker of the array, either for sensing the direction of magnetisation in the nanowhisker, or for forcing the nanowhisker into a desired direction of magnetisation. When the probe nanowhisker is formed by a VLS process using a catalytic particle melt, the whisker may be formed with a sacrificial segment to allow for removal of the catalytic material by selective etching of the segment.